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ABSTRACT

A questionnaire was administered to 101 Indiana University undergraduates to assess their exposure and reaction to graduate student associate instructors (AIs). The Likert-type questionnaire also obtained background data on the students. Analysis of item responses reveal that students generally react positively to AIs. The data indicate that students feel a) they can respond in class as well or better with AIs than with professors; b) they are comfortable in approaching AIs with problems in class; and c) AIs make themselves available outside of class. (These results are discussed in relation to the improvement of AIs instruction. Ten tables of statistical data are included along with a sample of the survey questionnaire.) (Author/BRB)

A Survey of Undergraduate Attitudes Toward Associate Instructors[1]

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August, 1973

[1]The authors wish to express thanks to Mr. Al Garcia for his assistance in this research.

Abstract

This document describes the results of a questionnaire administered to Indiana University undergraduates to assess their exposure and reaction to graduate student associate instructors (AIs). The Likert-type questionnaire obtained background data on the students and their opinions of the quality of instruction by AIs. Psychometric properties of the instrument and representativeness of sample statistics are provided. Analysis of item responses showed students generally react positively to AIs. Further, the data indicate that students feel they can respond in class as well or better with AIs than with professors. The results will serve as guides for planning improvement in AI instruction.

Introduction

The purpose of this questionnaire study was to assess the attitudes and opinions of undergraduate students at Indiana University toward Associate Instructors (AIs). The study was performed under the auspices of the Associate Instructor Teaching Skills Program (AITSP), a program designed to prepare graduate students in various academic disciplines to be better college instructors.

The questionnaire developed for this survey (See Appendix A) assesses the students' views on the quality of instruction by AIs. At Indiana University, half of the courses are taught by Associate Instructors and virtually every undergraduate is exposed to at least one AI every semester. In addition to assessing what the students believe about the quality of instruction this survey assesses the students' views about having AIs for teachers.

Review

In a review of the literature on student ratings of college teaching, Costin, Greenough, and Menges (1971) have found that associate and full professors receive higher teacher ratings than instructors and assistant professors (Clark and Keller, 1954; Comaford, 1951; Guthrie, 1949, 1954; Walker, 1969; and Gage, 1961). This suggests that experienced faculty are better instructors than AIs. However, among graduate teaching assistants Costin (1968) found that those who had completed a course in "Principles and Methods of Teaching Psychology" made significantly greater gains in student ratings than those AIs who had not taken such a course.

A study done by Mackertick (1970) looked at student ratings of AIs as a function of grade received and "personality type" of the AIs. He found that students who received grades of B and C used AIs as a resource

more than lectures, notes, and other aids; and students felt that AIs who were the "democratic type" gave them the most personal help.

The general theme of these studies is that associate instructors are valuable assets to any university; however, in general, they are rated by students as being less favorable than professors. This study attempts to determine the views undergraduates hold toward AIs on the Bloomington campus. This is a general survey the results of which will be used as general guidelines in discussions about the strengths and weaknesses of AIs. Hopefully, these results will provide information suggesting positive changes and planning for improving college instruction by AIs.

Procedures

The data were gathered by questionnaire through the campus mail system. The survey instrument was developed, psychomationally tested, and modified prior to use. The subjects were asked to respond anonymously to the questionnaire and mail it back in the pre-addressed enclosed envelopes.

The questionnaire was mailed out three weeks before the end of the fall semester and follow-up letters were sent two weeks later. A total of seven weeks were spent gathering and waiting for the mail returns. One hundred and one surveys were returned from an original sample of 302. The return rate for this survey is 33%.

Sampling Procedures. The sample for this survey was drawn from the entire undergraduate population on the Bloomington campus. A description of that sample appears in Table 1. Three demographic variables were used as selection criteria: Year in college (class standing), type of school enrolled, and type of housing.

Table 1

Description of the Population (Fall, 1972)
on Demographic Variables

Demographic Variable	Number of Students
Year in college:	
a. Freshman	6555
b. Sophomore	5247
c. Junior	5042
d. Senior	5496
TOTAL	22340
Type of School:	
a. University Division	8579
b. Arts and Sciences	6978
c. Education	2723
d. Business	2295
e. Music	693
f. Health, Physical Education and Recreation	560
g. Allied Health	397
h. Nursing	89
i. Other	26
TOTAL	22340
Type of Housing:	
a. Off-campus	7537
b. University housing	6886
c. Fraternity	1342
d. Sorority	955
e. Other	5620
TOTAL	22340

The sample of 302 subjects drawn was 1.35% of the population. According to Backstrom and Hursh (1963) a sample of this size would yield less than 6% error in a 0.95 confidence interval.

The actual obtained sample (N=101) is only a third as large as the sample. However, since the sample initially was randomly chosen,

it is assumed the obtained sample would also be random except for the biases introduced in returning the questionnaire.

Table 2 presents the data for the obtained sample (N=101) on the three demographic variables previously described for the population.

Table 2

Description of the Sample on Demographic Variables

Demographic Variables	Number of Students
Year in college:	
a. Freshman	40
b. Sophomore	31
c. Junior	22
d. Senior	8
TOTAL	101
Type of School:	
a. University Division	39
b. Arts and Sciences	33
c. Education	9
d. Business	8
e. Music	5
f. Health, Physical Education and Recreation	4
g. Allied Health	1
h. Nursing	2
TOTAL	101
Type of housing:	
a. Off-campus	12
b. University housing	75
c. Fraternity	4
d. Sorority	5
e. Other	5
TOTAL	101

In order to determine whether or not the obtained sample is representative of the population a Chi-square goodness-of-fit analysis was performed

between the obtained sample and the population sample. The results of this analysis are presented in Table 3.

Table 3

Representativeness of Sample

Demographic Variable	X^2	p
Year in college	17.71	$< .001$
Type of school	4.47	$< .75$
Type of housing	58.66	$< .001$

As can be seen in Table 3, the proportions in the sample are not significantly different from the population proportions for the variable type of school ($X^2 = 4.47$, df = 7, $p < .75$). However, on the other two demographic variables the sample proportions are significantly different from the population proportions and hence the sample is not representative of the population in terms of class standing and type of housing. These results reflect a poor return rate from seniors and off-campus housing. It is supposed that this type of survey seems less important to groups who are approaching the end of their college career. As well, it is presumed the low return rate from off-campus students is a function of less immediate access to campus mail.

Instrument

The survey questionnaire used in this study (see Appendix A) consists of two basic parts. The first part requests information about class standing, school, and type of housing. This section also asks the student how many different AIs they have had. This was asked to determine

whether or not there would be different opinions from those who had many and those who had few AIs.

Section 2 of the questionnaire consisted of twenty Likert-type items with a set of five responses from strongly agree to strongly disagree. The twenty statements cover a broad range of opinions about AIs. The statements ask whether AIs are organized, likeable, creative, fair, and knowledgeable. There are also a few statements about how AIs compare to faculty members.

Originally, the questionnaire consisted of 30 items which were pilot tested on a small group of people in order to determine the clarity of the statements. Ten of the statements were deleted because they were either vague or overlapped with other statements. The final questionnaire consisted of 20 statements.

In order to establish the stability of the scores obtained, the questionnaire was administered to 26 people, scored, and administered again a week later to the same 26 people. The two sets of scores were correlated using a Pearson r to determine the stability of the scores over time. The data from this test-retest reliability check is presented in Table 4.

Table 4

Test - Retest Reliability Coefficients
For Each Question (N=26)

Question Number	Test - Retest Coefficient	$p<.01$
1. I would like Associate Instructors to teach more of my courses.	0.78	*

Table 4
Continued

Question Number	Test - Retest Coefficient	p .01
2. Associate Instructors are generally disorganized.	0.67	*
3. Associate Instructors make the material too demanding (require too much material in too short a period of time).	0.74	*
4. Associate Instructors, in general, create the same learning atmosphere (interest, motivation) that professors do.	0.63	*
5. I respond (answer questions, interact with teachers) as well or better with AIs as I do with professors.	0.56	*
6. Associate Instructors are fair graders.	0.86	*
7. Associate Instructors present material in a creative way (is not boring).	0.49	
8. Associate Instructors are flexible (not regimented) when presenting material.	0.66	*
9. Associate Instructors are enthusiastic about the subject.	0.43	
10. Associate Instructors often use complicated terminology which confuses me.	0.58	*
11. Associate Instructors know if the class understands and is following presented material.	0.21	
12. I feel comfortable in approaching Associate Instructors with my problems in the course.	0.61	*
13. Associate Instructors make themselves available outside of class.	0.55	*
14. Associate Instructors seem to know the material well.	0.21	

15.	Associate Instructors usually allow enough time for questions and discussion on the subject.	0.46	
16.	Associate Instructors make clear what material is important (what you should know).	0.61	*
17.	Associate Instructors show a genuine interest in questions asked by his students.	0.82	*
18.	Associate Instructors conduct classes in a manner that maintains my interest.	0.59	*
19.	Associate Instructors don't usually enjoy teaching.	0.23	
20.	Sometimes the class lacks discipline when an Associate Instructor teaches.	0.74	*

The asterisked statements in the table have the most stable responses. These coefficients are significant beyond the .01 level ($r_{.01(24)} = .496$). The average stability coefficient for this questionnaire (after an r to z transformation) without these faulty items is 0.68. Statements numbered 7, 9, 11, 14, 15, and 19 all have low test-retest correlations.

Further analysis of the data included a principle components factor analysis of the twenty opinion items on the questionnaire for the sample of 101 people. The results of this factor analysis are presented in Table 5.

Table 5

Factor Loadings of the Two Principle Components for Analysis Based on All Questions (n = 101)

	Component 1	Component 2
Eigenvalue	6.727	1.975
Percent of Variance	33.633	9.877

Table 5
Continued

	Component 1	Component 2
Question 1	.694	.156
Question 2	-.332	.523
Question 3	-.228	.597
Question 4	.489	.148
Question 5	.483	.050
Question 6	.686	.058
Question 7	.709	.056
Question 8	.576	.025
Question 9	.755	.095
Question 10	-.177	.747
Question 11	.557	.120
Question 12	.602	-.116
Question 13	.699	.072
Question 14	.595	.228
Question 15	.623	.057
Question 16	.648	.109
Question 17	.773	.091
Question 18	.788	-.052
Question 19	-.385	.447
Question 20	-.115	.641

The questionnaire factored itself into two parts. Items numbered 2, 3, 10, 19, and 20 clustered into one factor and the remaining items clustered into a second factor. The items in factor 1 have an average inter-item correlation of 0.39, and the items in the second factor had an average inter-item correlation of 0.28 as shown in Table 6.

Table 6

Inter-item correlations for the two factors of the survey questionnaire (N = 101)

Factor	Average r*	Range
Factor 1 (all items except: 2, 3, 10, 19, 20)	0.39	0.10 to .675
Factor 2 (items 2, 3, 10, 19, 20)	0.28	-.388 to .448

*Following an r to z transformation

Results

Following the return of the mail questionnaires, the students' responses were coded and the data punched onto computer analysis. Since the information sought in this study is descriptive in nature, frequency distributions of the responses to each of the questions comprise the analyses.

Table 7 presents the frequency distribution of all the students' responses to each item on the questionnaire.

Table 7*

Frequency Distribution of Responses for Each Question (N = 101)

Question	SA** 1	A 2	Amb 3	D 4	SD 5
1	14	19	28	30	10
2	3	11	21	49	17
3	5	12	21	51	12
4	9	45	10	31	6
5	18	52	9	17	5
6	11	59	22	7	2
7	3	45	32	17	3
8	9	56	18	16	1
9	17	43	29	10	2
10	0	11	17	62	11
11	5	60	19	13	4
12	25	49	13	12	2
13	31	49	10	10	1
14	20	59	14	7	0
15	14	66	7	12	2
16	19	52	13	13	4
17	14	55	17	13	2
18	9	38	32	17	4
19	4	13	24	49	11
20	1	12	16	46	25

*Since the total sample size is 101, the numbers on this table can be interpreted as percentages.

**SA = Strongly Agree; A = Agree; Amb = Ambivalent; D = Disagree; SD = Strongly Disagree.

Question number 2 on the questionnaire asked: "While at I.U. how many different Associate Instructors have you had as instructors?" The distribution of responses was highly negatively skewed with a mean of 4.87, a median of 4.5, and a mode of 3.0. The students were split into two groups based on the responses to this question. The first group, low number of AIs, are all those students who had from 1 to 4 AIs so far in their academic careers. The second group, high number of AIs, are all those students who had 5 or more AIs.

Table 8 presents the frequency distribution of responses for each item on the questionnaire for each group.

Table 8*

Frequency distribution of responses
for each question for high number of AIs
and low number of AIs (N=101)

Question	High N=51					Low N=51				
	SA	A	Amb	D	SD	SA	A	Amb	D	SD
1	4	9	15	15	7	10	10	13	15	3
2	0	5	12	29	4	3	6	9	20	13
3	1	6	12	24	7	4	6	9	27	5
4	4	22	4	18	2	5	23	6	13	4
5	10	27	3	8	2	8	25	6	9	3
6	3	32	12	2	1	8	27	10	5	1
7	1	21	19	8	0	2	24	13	9	3
8	3	28	10	8	0	6	28	8	8	1
9	6	26	15	2	1	11	17	14	8	1
10	0	2	6	37	5	0	9	11	25	6
11	1	33	11	3	2	4	27	8	10	2
12	13	27	4	5	1	12	22	9	7	1
13	14	29	5	2	0	17	20	5	8	1
14	7	33	8	2	0	1	13	26	6	5
15	5	36	4	5	0	9	30	3	7	2
16	6	32	7	3	2	13	20	6	10	2
17	7	32	7	4	0	7	23	10	9	2
18	3	21	18	6	1	6	17	14	11	3
19	1	7	15	24	3	3	6	9	25	8
20	0	4	9	26	11	1	8	7	20	14

*Since the total sample size is 101, the numbers in this table can be interpreted as percentages.

The data from Tables 7 and 8 can also be reduced another step by adding together, for each item, the "strongly agree" and "agree" categories, and calling them "agree". The same can be done for the "disagree" categories. This simplifies comparison without changing the meaning of the data since "strongly disagree" and "disagree" differ only in quantity, not quality of response. The same holds for the "agree" categories.

Tables 9 and 10 present the same data as 7 and 8 except the data has been reduced to three response categories.

Table 9

Frequency distribution of responses
for each question (three response categories)
(N=101)

Question	"Agree"	Ambivalent	"Disagree"
1	33	28	40
2	14	21	66
3	17	21	63
4	54	10	37
5	70	9	22
6	70	22	9
7	48	32	20
8	65	18	17
9	70	29	12
10	11	17	73
11	65	19	17
12	74	13	14
13	80	10	11
14	79	14	7
15	80	7	14
16	71	13	17
17	69	17	15
18	47	32	21
19	17	24	60
20	13	16	71

Table 10

Frequency distribution of responses
for each question for high number of AIs
and low number of AIs (three response categories)
(N=101)

Question	High Number of AIs "Agree"	Ambivalent	"Disagree"	Low Number of AIs "Agree"	Ambivalent	"Disagree"
1	13	15	22	20	13	18
2	5	12	33	9	9	33
3	7	12	31	10	9	32
4	26	4	20	28	6	17
5	37	3	10	33	6	12
6	34	12	3	35	10	6
7	22	19	8	26	13	12
8	31	10	8	34	8	9
9	32	15	3	28	14	9
10	2	6	42	9	11	31
11	34	11	5	31	8	12
12	40	4	6	34	9	8
13	43	5	2	37	5	9
14	40	8	2	14	26	11
15	41	4	5	39	3	9
16	38	7	5	33	6	12
17	39	7	4	30	10	11
18	24	18	7	23	14	14
19	8	15	27	9	9	33
20	4	9	37	9	7	34

Conclusion

The data in this survey has been shown to be trustworthy and reliable. They therefore provide conclusive evidence that the role of Associate Instructors at Indiana University is a significant one. It is particularly important for underclassmen, since the highest proportion of respondents to this questionnaire were freshmen and sophomores, from all schools across the Bloomington campus. On the average, underclassmen have 3-6 courses with AIs and, further, virtually all undergraduates have at least one AI during each semester. A summary of some of the most significant findings

will illuminate why this instructor role is so important.

First of all, students indicated that they feel they can respond in class as well or better with AIs than with professors. It may be that the perceived "distance" between students and AIs is less, perhaps due to closer ages, than between students and professors. Students also feel comfortable approaching AIs with problems in class. And finally, students believe that AIs take the time to make themselves available outside of class. These findings are true for those who have had many or few AIs and hence it is obvious that a significant amount of instructional interaction does take place between student and AI.

The conclusion from these findings is that students, especially freshmen and sophomores, spend much of their learning time engaged with AIs, and, therefore, it is imperative that this time be well spent. It is crucial that the AIs have well-established teaching skills that enhance college student learning. It is already apparent from this survey that most AIs are generally organized, flexible, seem to be relatively fair graders, and show interest in student questions. They are by and large positively perceived. However, there is also some indication that AIs don't particularly make classes interesting in some individual cases. It is clear that AIs play a significant role in undergraduate instruction. For the most part, students feel positively about AIs. This is an encouraging finding and points to the necessity for continually improving and maintaining a high quality graduate student teaching personnel.

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Appendix A

INDIANA UNIVERSITY
The University Division
101 MAXWELL HALL
BLOOMINGTON, INDIANA 47401

OFFICE OF THE DEAN

TEL. NO. 812—337-4961

Dear Fellow Student:

Here at Indiana University you are exposed to a variety of different teachers (full professors, associate professors, assistant professors, and associate instructors - AIs or TAs) who implement a variety of teaching methods and techniques. Our basic concern in this survey is to assess the attitudes of students toward associate instructors (graduate student teachers, TAs). This survey is being conducted in conjunction with the Associate Instructor Teaching Skills Program (AITSP) which is a campus-wide program designed to teach associate instructors better teaching methods.

Your response will be treated as strictly confidential, and all results will be reported as group data.

Respond to the questionnaire based on the opinions you have formed toward associate instructors. Place the completed questionnaire in the enclosed, self-addressed envelope and deposit in a campus mail box or return to Maxwell Hall, Room 122.

Please respond promptly after receiving and thank you.

Sincerely,

Al Garcia

Nicholas Stayrook

Associate Instructor
Teaching Skills Program

SURVEY QUESTIONNAIRE

Directions:

This questionnaire has been developed in conjunction with the Associate Instructor Teaching Skills Program (AITSP). The program is designed to help Associate Instructors (graduate student teachers) develop the necessary teaching skills to be effective college teachers. Please be honest, candid, and take time with your answers. Do NOT write your name on this questionnaire.

1. Classification: (circle one in each category)

a) Year: Freshman Sophmore Junior Senior

b) School: Univ. Div. Business Arts & Sciences

Music Education Other (specify)_____

c) Housing: Fraternity Sorority University Housing

Off Campus

2. While at I.U. how many different Associate Instructors have you had as instructors? _____

Answer questions 3 - 22 according to the following key:

Strongly Agree	(SA)	1
Agree	(A)	2
Ambivalent		3
Disagree	(D)	4
Strongly Disagree	(SD)	5

	(circle one)				
	SA	A		D	SD
1. I would like Associate Instructors to teach more of my courses	1	2	3	4	5
2. Associate Instructors are generally disorganized.	1	2	3	4	5
3. Associate Instructors make the material too demanding (require too much material in too short a period of time.)	1	2	3	4	5

		(circle one) SA	A		D	SD
4.	Associate Instructors, in general, create the same learning atmosphere (interest, motivation) that professors do.	1	2	3	4	5
5.	I respond (answer questions, interact with teachers) as well or better with AIs as I do with professors.	1	2	3	4	5
6.	Associate Instructors are fair graders.	1	2	3	4	5
7.	Associate Instructors present material in a creative way (is not boring).	1	2	3	4	5
8.	Associate Instructors are flexible (not regimented) when presenting material.	1	2	3	4	5
9.	Associate Instructors are enthusiastic about the subject.	1	2	3	4	5
10.	Associate Instructors often use complicated terminology, which confuses me.	1	2	3	4	5
11.	Associate Instructors know if the class understands and is following presented material.	1	2	3	4	5
12.	I feel comfortable in approaching Associate Instructors with my problems.	1	2	3	4	5
13.	Associate Instructors make themselves available outside of class.	1	2	3	4	5
14.	Associate Instructors seem to know the material well.	1	2	3	4	5
15.	Associate Instructors usually allow enough time for questions and discussion on the subject.	1	2	3	4	5
16.	Associate Instructors make clear what material is important (what you should know).	1	2	3	4	5
17.	Associate Instructors show a genuine interest in questions asked by his students.	1	2	3	4	5
18.	Associate Instructors conduct classes in manner that maintains my interest.	1	2	3	4	5
19.	Associate Instructors don't usually enjoy teaching.	1	2	3	4	5
20.	Sometimes the class lacks discipline when an Associate Instructor teaches.	1	2	3	4	5